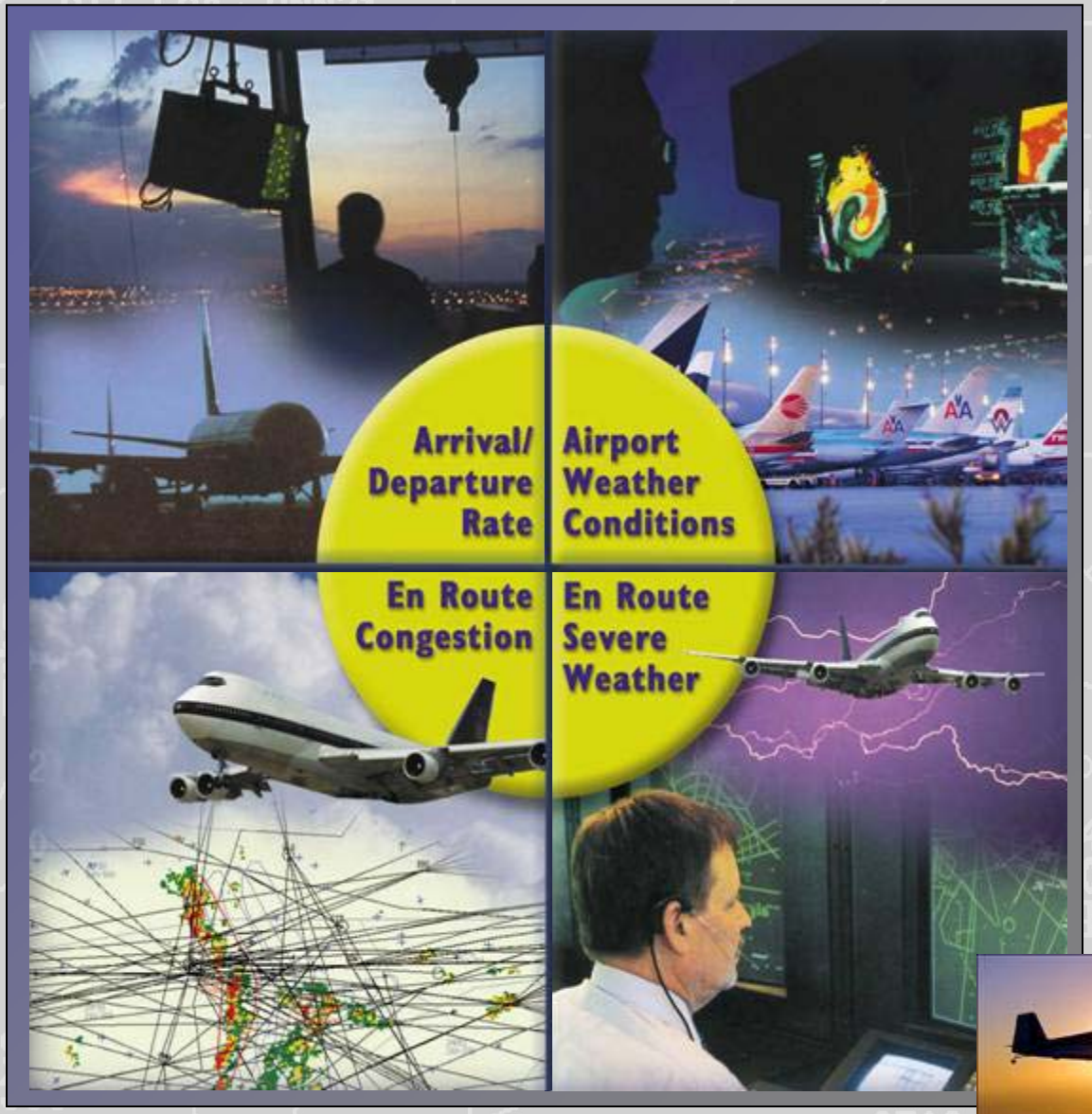
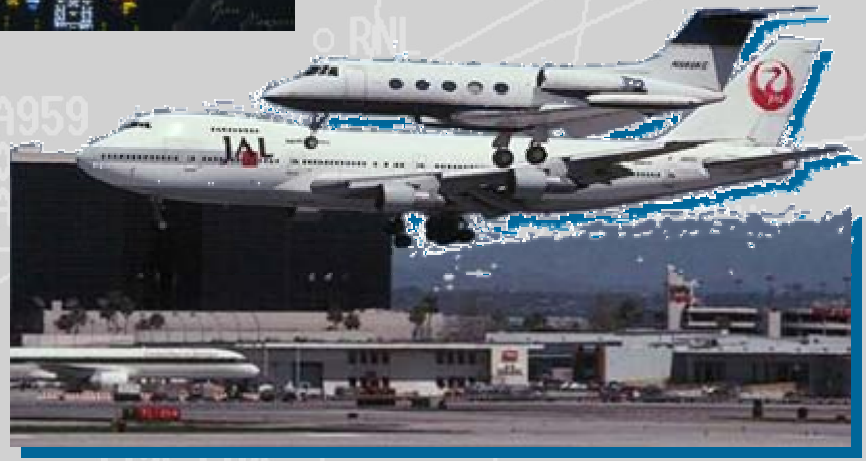


U.S. National Airspace System

Trans-formation

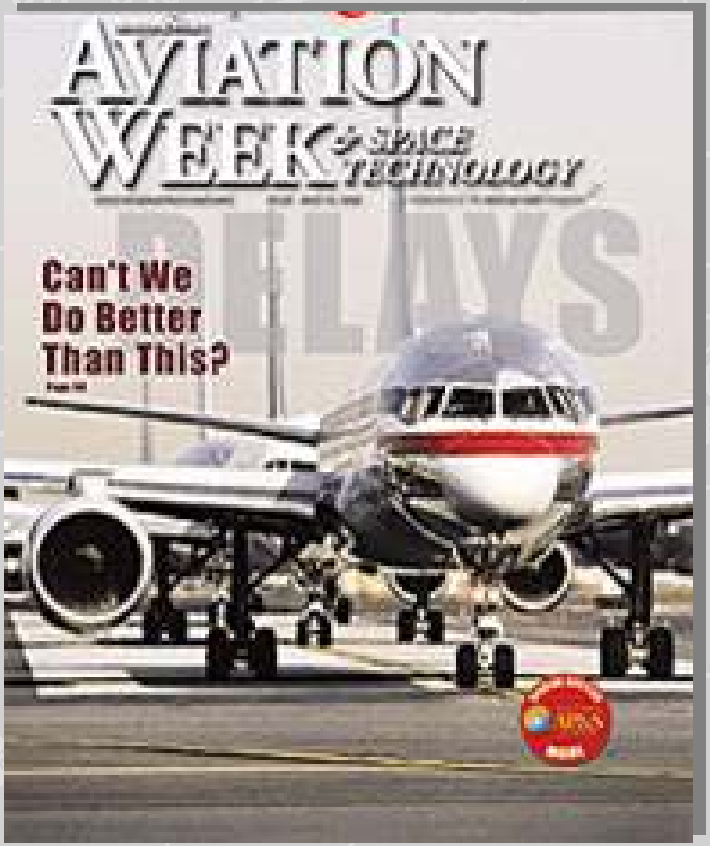
Outline

- ✓ **NAS 10-Year Transition**
  - ❑ From ground-based systems to airborne/space-based
  - ❑ Flying closer together with more efficient use of airspace
  - ❑ Using R-CNS-P
- ✓ **Changes Required in the Fleet/Technical Mix**
  - ❑ RNP
  - ❑ ADS-B
  - ❑ WAAS
- ✓ **Challenge -- Global Participation**
  - ❑ Make system accessible, affordable, internationally harmonized
  - ❑ Cost, schedule, security
  - ❑ Responsibility, accountability

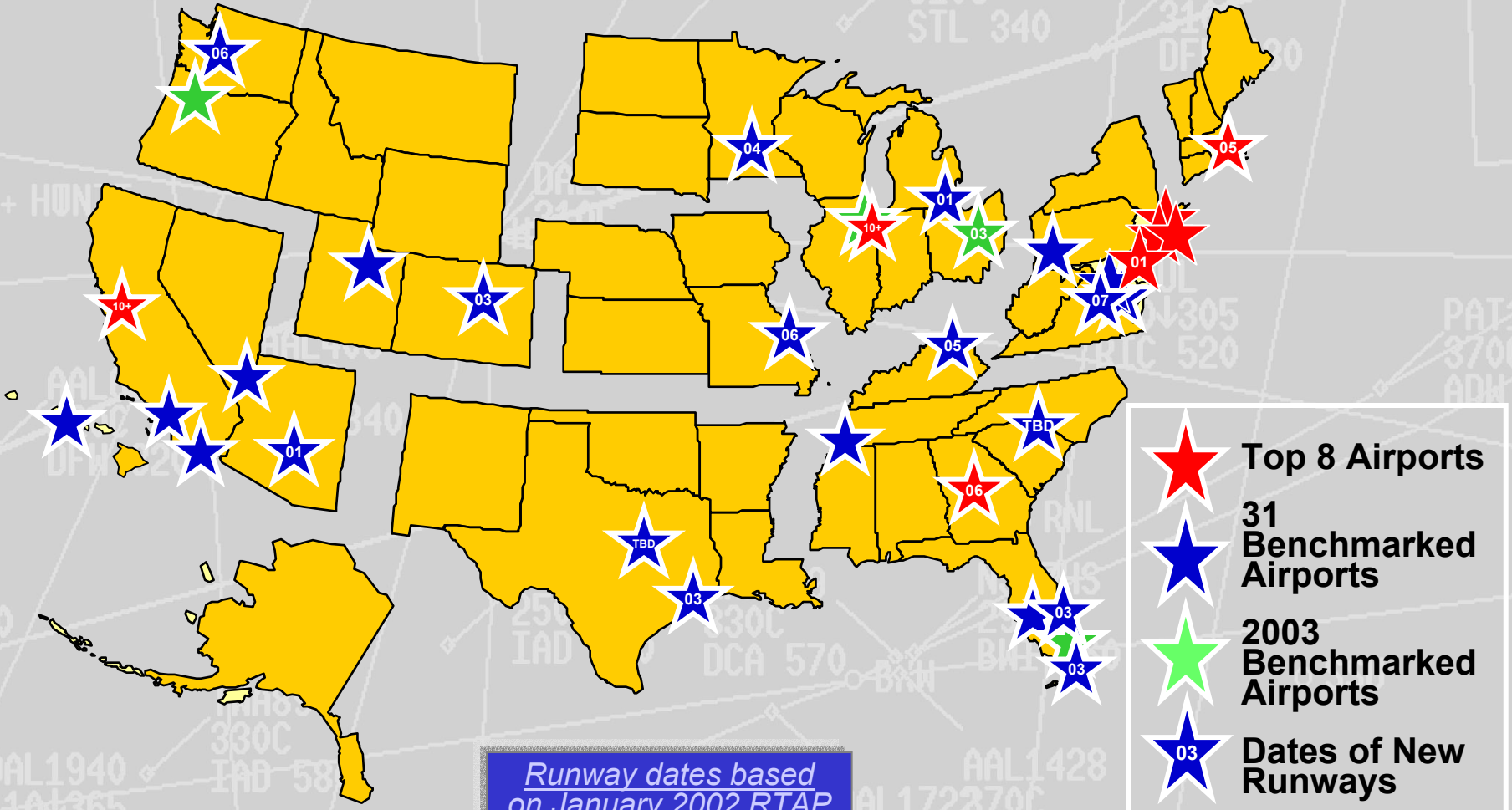


Operational Change Leading to Increased Effective Capacity

- ✓ **What We Do to Affect Change:**
  - ❑ Identify needs
  - ❑ Establish Goals
  - ❑ Implement Solutions
  - ❑ Measure Results
- ✓ **Capabilities Delivered Need To Be:**
  - ❑ Safe
  - ❑ Secure
  - ❑ Operationally beneficial
  - ❑ Delivered with stewardship of the nation's funds



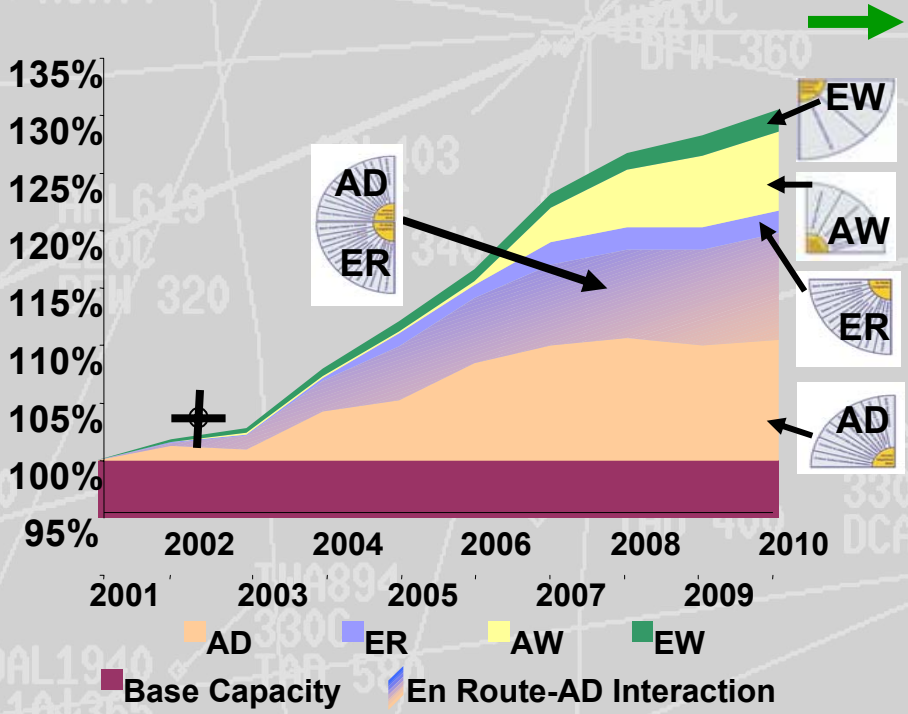
Where Are We Making the Changes
Benchmarked Airports and New Runways



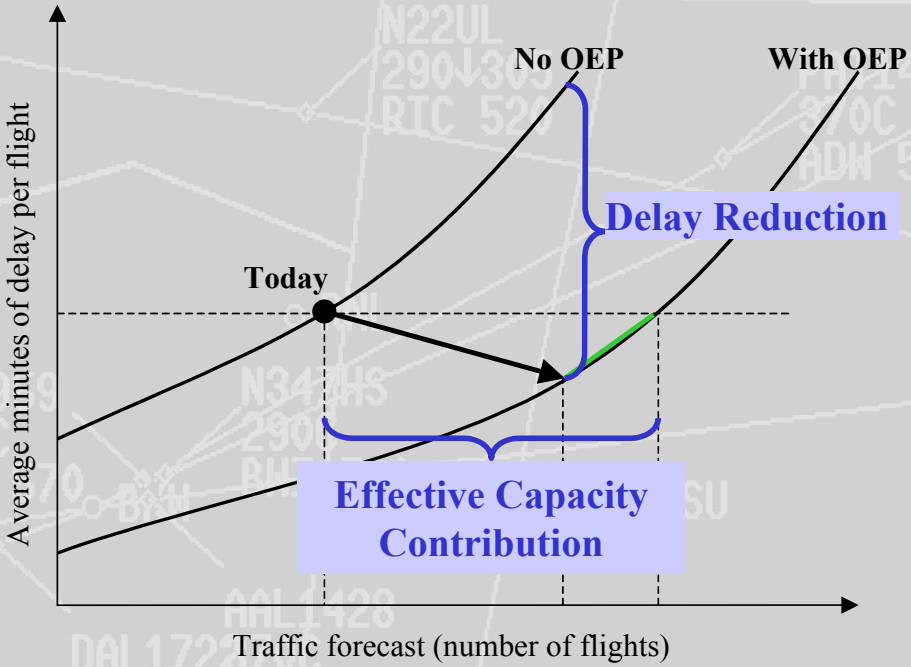
Runway dates based on January 2002 RTAP Quarterly Report

OEP Objective – Increase Effective Capacity

- ✓ Effective Capacity up about 3%
- ✓ Plans are to update the model to account for weather and traffic changes



Effective Capacity: Average Delay, Total Traffic

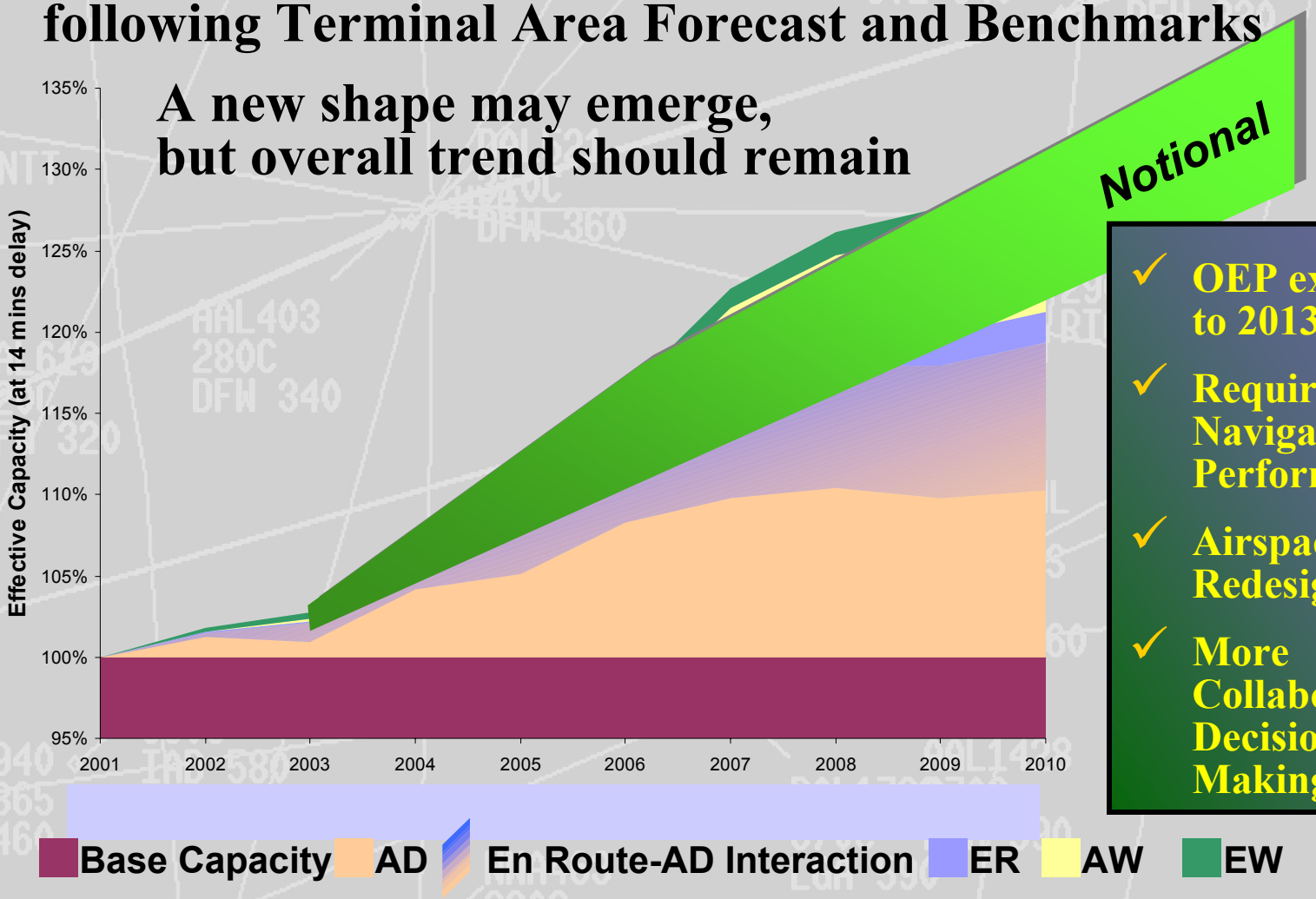


MITRE CAASD

Rolling Forward

The capacity mountain will be updated this year following Terminal Area Forecast and Benchmarks

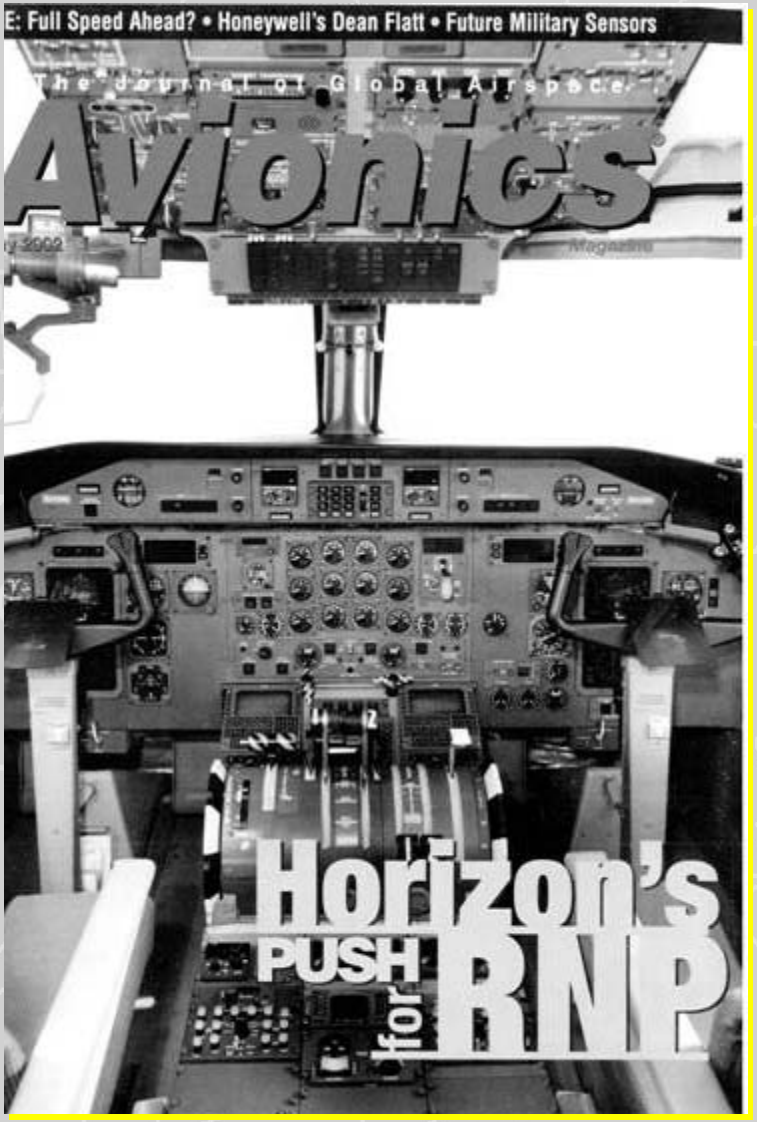
A new shape may emerge, but overall trend should remain



- ✓ OEP extends to 2013
- ✓ Required Navigation Performance
- ✓ Airspace Redesign
- ✓ More Collaborative Decision Making

MITRE CAASD

Changes in Fleet/Technical Mix



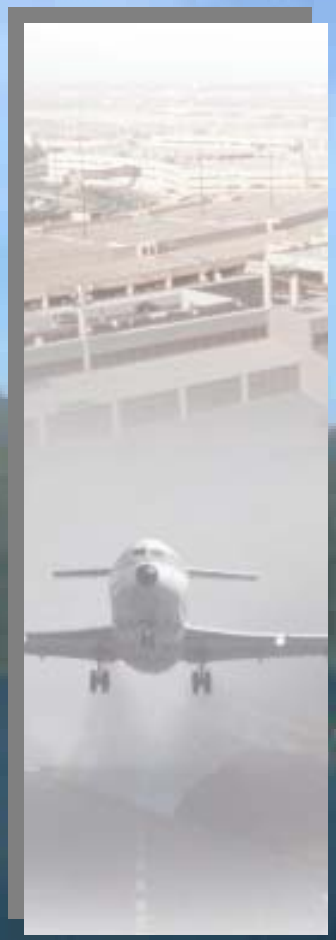
Well-dressed cockpit

- ✓ **ADS-B**
  Automatic Dependent Surveillance – Broadcast
- ✓ **WAAS**
  Wide Area Augmentation System
- ✓ **RNP**
  Required Navigation Performance

FAA Commitment

Leading the Transition From Ground-Based to Performance-Based Navigation

- ✓ Take Advantage of Existing Aircraft Capabilities
- ✓ Feature Satellite-based Navigation System
- ✓ Leverage New Technologies, Equipage, Infrastructure, and Procedural Developments to Maximize Benefits and System Efficiencies



Efficiency Improvements Achieved

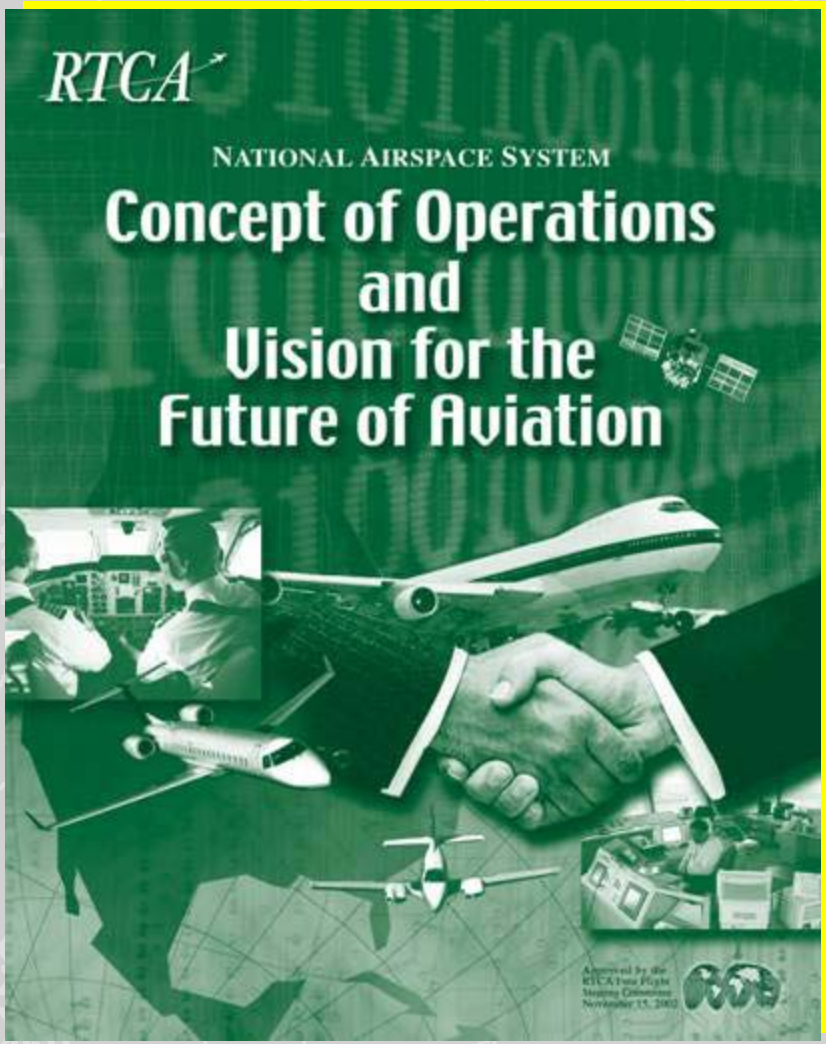
- ✓ Less airspace needed per operation
- ✓ Independent parallel approaches possible to runways separated by 2500 feet.

- ✓ Minima below that of ground based equipment at 4 Alaskan Airports
- ✓ Approaches to runways that can or not be served with ground based equipment at 6 Alaskan Airports
- ✓ 65 flights to Juneau in the first 9 months of 2001 were “saved” by RNP

Harmonization

- ✓ Continued partnership with ICAO
- ✓ Continued partnership with Europe via Eurocontrol and the European Commission
  - ❑ Biennial senior-level executive harmonization meetings
  - ❑ Expanding relationship from collaborative R&D right through to operations
  - ❑ Collaborating on performance measurement and benchmarking efforts
  - ❑ On-site ATM and Systems Technology staff resident in Brussels office, working day to day with European, Middle East and Africa counterparts
- ✓ Cost, schedule, security

CRITICAL POINTS



✓**CONSENSUS**
Our biggest risk, our key challenge, internally and externally. The consensus-based approach is more important now than ever because it requires synchronized, mutual investments by airports, airlines and the government.

✓**METRICS**
We aggressively utilize measurement in virtually everything we manage.

✓**INTERNATIONAL HARMONIZATION**
Obtain global participation. Synchronize systems and procedures. Share data.